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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/599,141	09/21/2006	Paul Royston Harvey	PHNLO40309US	4939
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EXAMINER MARTELLO, EDWARD				
ART UNIT 2628		PAPER NUMBER		
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/599,141

Applicant(s)

HARVEY ET AL.

Examiner

Edward Martello

Art Unit

2628

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 September 2006.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-13 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 21 September 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB-06)
Paper No(s)/Mail Date 09/21/2006
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

1. Claims 1-10 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The claims are directed to “a user interface” which is non-statutory subject matter. User interfaces per se are non-functional descriptive material and must be embodied in some physical structure which provides the functional descriptive material in usable form (computer executable instructions or code) to permit the functionality to be realized with a computer or machine. The Examiner is continuing the prosecution of the application by equating “a user interface” to a method for producing an interactive user interface in a computer controlled system.
2. Claim 11 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The claim is directed to “a computer program” which is non-statutory subject matter. Programs and program code are non-functional descriptive material and must be embodied in some physical structure which provides the functional descriptive material in usable form (computer executable instructions or code) to permit the functionality to be realized with the computer. The Examiner is continuing the prosecution of the application by equating “a computer program” to a method.

3. Claim 13 is rejected under 35 U.S.C. § 101 as not falling within one of the four statutory categories of invention. Supreme Court precedent¹ and recent Federal Circuit decisions² indicate that a statutory “process” under 35 U.S.C. § 101 must (1) be tied to another statutory category (such as a particular apparatus), or (2) transform underlying subject matter (such as an article or material) to a different state or thing. While the instant claim(s) recite a series of steps or acts to be performed, the claim(s) neither transform underlying subject matter nor positively tie to another statutory category that accomplishes the claimed method steps, and therefore do not qualify as a statutory process. For example, the language of claim 13 defines a method for the operation of a user interface for a magnetic resonance imager, involving the steps of (1); presenting information indicating the effects of the assignment of values to attributes used to influence the content of the visual presentation of an acquired magnetic resonance image (2); choosing values for at least one such assignment based on the information presented and (3); assigning the chosen value to the attribute. These steps do not inherently require the disclosed particular machine, article of manufacture or composition of matter as they can be performed manually using pencil and paper to draw out the user interface image data and present a series of values for choosing values to be applied to a MRI operation and the chosen value can be written for manual entry into an appropriate system. If claim 13 was amended to specify a method with appropriate language to allow the methods to be executed on the MRI system of the instant application, the claim would be tied to a physical device that would be a valid statutory category.

¹ *Diamond v. Diehr*, 450 U.S. 175, 184 (1981); *Parker v. Flook*, 437 U.S. 584, 588 n.9 (1978); *Gottschalk v. Benson*, 409 U.S. 63, 70 (1972); *Cochrane v. Deener*, 94 U.S. 780, 787-88 (1876).

² *In re Bilski*, 88 USPQ2d 1385 (Fed. Cir. 2008).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(c) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-3, 5-7 and 11-13 are rejected under 35 U.S.C. 102(e) as being anticipated by Brackett et al. (U. S. Patent Application Publication 2005/0114140 A1, hereafter '140).
5. Regarding claim 1, Brackett teaches a user interface (method) ('140; Abstract) for a magnetic resonance imager ('140; ¶ 024), arranged to assign values to at least one attribute used to influence the visual presentation of an acquired magnetic resonance image ('140; fig. 5; ¶ 0047-0048), wherein the values of the at least one attribute are arranged to be chosen from information indicating the effects of their assignment on the content of the visually presented acquired magnetic resonance image ('140; fig. 3, 4, 5 & 6; ¶ 0042-0049).
6. In regard to claim 2, Brackett further teaches wherein the value of the at least one attribute determines parameters which control the acquisition of magnetic resonance signal which is reconstructed to form the acquired magnetic resonance image, wherein ('140; ¶ 0024; ¶ 0049), the values of the at least one attribute are arranged to be chosen from information indicating the effect of the determined parameters on the acquisition of the magnetic resonance

signal which is reconstructed to form the acquired magnetic resonance image ('140; fig. 3, 4, 5 & 6; ¶ 0042-0049; claims 1 & 7).

7. Regarding claim 3, Brackett teaches a user interface (method) as claimed in claim 1 and further teaches wherein, the information indicating the effects of the assignment of the attributes on the content of the visually presented magnetic resonance image is presented as a series of discrete choices ('140; fig. 3, 4, 5 & 6; ¶ 0042-0049).

8. Regarding claim 5, Brackett teaches a user interface (method) as claimed in claim 1 and further teaches wherein it comprises a visual presentation means ('140; display; ¶ 0008); for presenting the effects of the assignment of the attribute to the user ('140; fig. 4), and further comprises an instruction input means to convey the assignment of the value of the at least one attribute to the magnetic resonance imager ('140; fig. 3, 4, 5 & 6; ¶ 0042-0049).

9. In regard to claim 6, Brackett further teaches wherein, the value of the attribute is conveyed to the magnetic resonance imager through voice control ('140; fig. 3, 4, 5 & 6; ¶ 0024; ¶ 0042-0049).

10. Regarding claim 7, Brackett teaches a user interface (method) as claimed in claim 1 and further teaches wherein, the at least one attribute is arranged to be chosen from the user interface during the acquisition of magnetic resonance image ('140; fig. 3, 4, 5 & 6; ¶ 0024; ¶ 0042-0049).

11. Regarding claim 11, Brackett teaches a computer program (method) used to control a user interface ('140; Abstract) for the acquisition of a magnetic resonance scan ('140; ¶ 024), the computer program (method) being arranged to assign values to at least one attribute used to influence the visual presentation of an acquired magnetic resonance image ('140; fig. 5; ¶ 0047-0048), wherein, the computer program is arranged to present information indicating the effects of the values on the content of the visually presented acquired magnetic resonance image ('140; fig. 3, 4, 5 & 6; ¶ 0042-0049), and the computer program being further arranged to receive the values as input values ('140; fig. 5; ¶ 0047-0048).

12. In regard to claim 12, Brackett teaches a magnetic resonance system for the acquisition of magnetic resonance images ('140; fig. 1; ¶ 024), wherein the magnetic resonance system is arranged to assign values to at least one attribute used to influence the visual presentation of an acquired magnetic resonance image ('140; fig. 5; ¶ 0047-0048), wherein the magnetic resonance system is arranged to present information indicating the effects of the values on the content of the visually presented acquired magnetic resonance image ('140; fig. 3, 4, 5 & 6; ¶ 0042-0049), the magnetic resonance system being further arranged to receives the values as input values ('140; fig. 5; ¶ 0047-0048).

13. Regarding claim 13, Brackett teaches a method for the operation of a user interface ('140; Abstract) for a magnetic resonance imager ('140; ¶ 024), involving the steps of presenting information indicating the effects of the assignment of values to attributes used to influence the content of the visual presentation of an acquired magnetic resonance image ('140; fig. 3, 4, 5 &

6; ¶ 0042-0049), choosing values for at least one such assignment based on the information presented('140; fig. 5; ¶ 0047-0048), assigning the chosen value to the attribute('140; fig. 5; ¶ 0047-0048).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
 2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
14. Claims 4 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brackett et al. (U. S. Patent Application Publication 2005/0114140 A1, hereafter '140), as applied to claims 1-3, 5-7 and 11-13 above and in view of Debbins et al. (U. S. Patent 6,108,573, already of record, hereafter '573).
15. In regard to claim 4, Brackett teaches a user interface (method) as claimed in claim 3 but does not teach wherein, the information presented in a series of discrete choices is presented as a

series of visual samples. Debbins, working in the same field of endeavor, however, teaches wherein, the information presented in a series of discrete choices is presented as a series of visual samples ('573; fig. 5-7; col. 5, ln. 48 through col. 6, ln. 54) for the benefit of compactly presenting the effects of device operation parameter selection to the user to allow an uncomplicated and easy to use interface that does not require detailed technical knowledge of the operational parameters of the MRI device. It would have been obvious to one of ordinary skill in the art at the time of the invention to have combined the teachings of Debbins of presenting a series of visual samples with the voice operated command and control teaching of Brackett for the benefit of compactly presenting the effects of device operating parameter selection to the user to allow an uncomplicated and easy to use interface that does not require detailed technical knowledge of the operational parameters of the MRI device.

16. In regard to claim 8, Brackett teaches a user interface (method) as claimed in claim 7, but does not teach wherein the content of the visual presentation of the magnetic resonance image is updated via the user interface during acquisition of the magnetic resonance image, and the at least one attribute is arranged to be chosen from the user interface during the evolution of the updateable presentation of the content of the magnetic resonance image. Debbins, working in the same field of endeavor, however, teaches wherein the content of the visual presentation of the magnetic resonance image is updated via the user interface during acquisition of the magnetic resonance image ('573; fig. 5-7; col. 5, ln. 48 through col. 6, ln. 54), and the at least one attribute is arranged to be chosen from the user interface during the evolution of the updateable presentation of the content of the magnetic resonance image('573; fig. 5-7; col. 5, ln. 48 through

col. 6, ln. 54) for the benefit of showing the effect of image parameter changes in real-time and compactly presenting the effects of device operation parameter selection to the user to allow an uncomplicated and easy to use interface that does not require detailed technical knowledge of the operational parameters of the MRI device. It would have been obvious to one of ordinary skill in the art at the time of the invention to have combined the teachings of Debbins of showing the effect of image parameter changes in real-time and presenting a series of visual samples with the voice operated command and control teaching of Brackett for the benefit of compactly presenting the effects of device operating parameter selection to the user to allow an uncomplicated and easy to use interface that does not require detailed technical knowledge of the operational parameters of the MRI device.

17. Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brackett et al. (U. S. Patent Application Publication 2005/0114140 A1, hereafter '140), as applied to claims 1-4, 5-8 and 11-13 above and in view of Bonanni et al. (U. S. Patent 6,400,157, already of record, hereafter '157).

18. Regarding claim 9, Brackett teaches a user interface (method) as claimed in claim 7 but does not teach wherein, the at least one attribute is image resolution. Bonanni, working in the same field of endeavor, however, teaches wherein, the at least one attribute is image resolution ('157; fig. 3; col. 8, ln. 1-29) for the benefit of allowing the user to insure that enough image detail is captured for the specific patient and procedure. It would have been obvious to one of ordinary skill in the art at the time of the invention to have combined the resolution selection and

real-time response to the control teachings of Bonanni with the voice operated command and control teaching of Brackett for the benefit of allowing the user to insure that enough image detail is captured for the specific patient and procedure.

19. In regard to claim 10, Bonanni further teaches wherein, the magnetic resonance image is acquired using a centric encoding order ('157; col. 8, ln. 46 through col. 9, ln. 2).

Conclusion

The following prior art, made of record, was not relied upon but is considered pertinent to applicant's disclosure:

US 6690961 B1	Apparatus and method for transition between fluoro-mode and diagnostic mode magnetic resonance imaging – Provides the operator with real-time parameter control of the MRI imaging device. The input operator controls are the usual computer devices and other unspecified devices which would allow voice input control.
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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Edward Martello whose telephone number is (571) 270-1883.

The examiner can normally be reached on M-F 7:30-5:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Xiao Wu can be reached on (571) 272-7761. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/EM/

Examiner, Art Unit 2628

/XIAO M. WU/
Supervisory Patent Examiner, Art Unit 2628